

Remarks

Claims 1 - 15 are pending. Favorable reconsideration is respectfully requested.

Accompanying this response is a further Information Disclosure Statement and a check for the amount of \$180.00 under 37 C.F.R. § 1.97(c). Applicants apologize for not citing these references earlier; they were cited in the course of an opposition proceeding against the granted European counterpart application. The references cited have also resulted in the presentation of amended claims, submitted herewith. The claims now require that the EVOH protective colloid be used for both polymer preparation by emulsion or suspension polymerization, as well as in spray drying, as exemplified by powders 1 and 2 on page 17 of the application. None of the amendments raise any issue of new matter.

Also enclosed is a copy of the Opposers statement, which is in the English language. Applicants expect that claims substantially of the same scope as now presented in the U.S. case will be confirmed in the Opposition.

There are numerous references in the prior art which include a "shopping list" of protective colloids for emulsion polymerization.¹ Included among these are often hydrophobically modified polyvinylalcohol (PVOH) protective colloids. Numerous methods of "hydrophobing" are possible, including modification with reactive silanes and siloxanes and numerous other modifiers and comonomers, one of the latter being ethylene. However, despite citing these other protective colloids as useful, such as is done in U.S. 6,576,698 (Weitzel EP 1110978) and 6,605,663 (Weitzel EP 1065224), these references generally employ partially or fully hydrolyzed polyvinyl acetate polymers, generally termed by those skilled in the art as partially or fully hydrolyzed polyvinyl alcohol polymers. None of these references are known

¹ It is noted that U.S. 6,001,903 is not among these references. The '903 patent cites a very unusual protective colloid which bears a reactive thiol (-SH) group, and which becomes bonded to the dispersion polymer by Michael addition during polymerization. None of Applicants' protective colloids are thiol functional.

to employ an ethylene-vinyl alcohol ("EVOH") polymer as a protective colloid for polymerization. An exception is Mayer U.S. 6,300,403, which employs a mixture of PVOH and EVOH as a protective colloid during polymerization only.

Applicants' claims require that EVOH protective colloids be employed both during polymerization and during spray drying, which the art does not teach or suggest. None of the references cited by the Examiner and none of the references cited in the opposition teach or suggest this result. All references known employ PVOH as the protective colloid for spray drying.

In Applicants' examples, polymer dispersions polymerized with EVOH and spray dried with EVOH are compared with a conventional polymer polymerized with PVOH as the protective colloid and spray dried with PVOH as well. The polymers were added to tile adhesives, which have been used for hundreds of years, and for decades with redispersible polymer additives. Despite the maturity of this technology, Applicants' redispersible polymers using EVOH as protective colloid both during polymerization effected a considerable and significant increase in tensile strength after freeze/thaw cycles. That this significant increase in strength could be achieved by using EVOH for both polymerization and spray drying is highly surprising and unexpected. As can be seen from the other examples, additional properties benefit as well.

Because of the amendments to the claims and further in view of the remarks presented above, Applicants respectfully submit that the claims as now presented are novel and non-obvious over the references. Applicants further believe that the claims are novel over the references cited in the opposition.

Applicants submit that the claims are now in condition for Allowance, and respectfully request a Notice to that effect. If the Examiner believes that further discussion will advance the prosecution of the Application, the Examiner is highly encouraged to telephone Applicants' attorney at the number given below.

Respectfully submitted,

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